To: Velez, Glenda[Velez.Glenda@epa.gov]
From: DeMeo, Sharon M.
Sent: Wed 10/22/2014 12:40:58 PM
Subject: FW: FY 2015 training plans/requests

Hi Glenda,

Thanks for keeping this moving. Scroll down to see both justification and agenda items (let me know if you need the dates for these). Thanks again!

From: DeMeo, Sharon M.
Sent: Thursday, September 18, 2014 4:17 PM
To: Houlihan, Damien
Subject: RE: FY 2015 training plans/requests

Hi Damien,

Please see information below as requested. Let me know if you have any questions. Thanks.

- Name: Sharon DeMeo
- Title of course (or subject, if not known): International Water Conference
- Date(s) of course (or time frame, if specific date is unknown): November 16-20, 2014
- Location of course/training: San Antonio, TX
- Cost of course/training: $395
- Travel Costs: approximately $400 + hotel
- Number of hours in training: 24 (3 days)
- Other OEP attendees: no
- Proposed funding, if known – PRC number, regional funds, program funds, HQ

funding

•□□□□□□ Status: no

•□□□□□□ Objective:

This document provides the justification for Sharon DeMeo to attend the 2014 International Water Conference. The conference, which is held yearly, presents the latest scientific advances and applications available for the use and reuse of water for industrial purposes. This year's conference takes place from November 16th through the 2th in San Antonio, Texas. The registration fee at this time is $395 for a full-time government employee to attend. This fee includes attendance to any of the technical sessions and exhibit hall. The papers are available on flash drive for an additional $35. Continuing education workshops are also offered for an additional fee of $250 per course.

It is necessary for Sharon to attend the conference to gain additional technical information and knowledge concerning Merrimack Stations flue gas desulfurization system. This knowledge is required to continue the NPDES permitting process for the facility. Specifically, EPA Region I is making a site-specific, best professional judgment determination under the Clean Water Act for the treated wastewater from the company's state-of-the-art pollution control system. Region I is one of the first permitting authorities in the country to make such a determination. Multiple papers on the treatment of flue gas desulfurization wastewater will be presented at several technical sessions, including one specific to the experiences at Merrimack Station.

Design and Operation of Zero Liquid Discharge Systems (ZLD)

Zero Liquid Discharge (ZLD) represents the ultimate in water utilization effi ciency and responsiveness to environmental discharge concerns. In some confi gurations, this powerful technology is capable of recovering nearly every drop of water entering the site while freeing the owner from variable and increasingly stringent discharge requirements. ZLD selection and configuration depend on numerous factors including fuel source, water chemistry, climate, environmental requirements, CapEx, and OpEx. The papers in this session will help you navigate through the many ZLD strategies, select the most appropriate ZLD system for your site, and share valuable ZLD operating experience.

IWC-14-13
Evaluating ZLD Strategies
William Shaw, Veolia Water North America, Pewaukee, WI

IWC-14-14
Design Issues for a Zero Liquid Discharge (ZLD) Wastewater Treatment System for a 6x800 MW WFGD Retrofit Project
Steve Russell, Black & Veatch, Overland Park, KS

IWC-14-15
Thermal ZLD Operating Experience for FGD Wastewater at PSNH's Merrimack Stattion
Richard Roy, Public Service of New Hampshire, Bow, NH

IWC-14-16
Thermal ZLD System Using A Spray Dry Evaporator (SDE) In A Waste To Energy Plant, A Case Study
Ashwin Patni, Lechler Inc., St Charles, IL

Anticipating New Discharge Requirements for FGD-Equipped Power Plants
Power plants equipped with flue gas desulfurization (FGD) systems face challenging wastewater issues. Most notably, the U.S. Environmental Protection Agency (EPA) has proposed new Effluent Limitation Guidelines (ELG) that aim to significantly tighten discharge limits on mercury, selenium, arsenic and nitrates across the U.S. Other contaminants of increasing concern, such as boron, will also be subject to mitigation efforts. Since FGD wastewaters involve complex chemistries, meeting more stringent discharge requirements is rarely simple, and usually requires exploring and advancing state-of-the-art approaches. This session provides some recent learnings from real-world efforts to reduce wastewater discharges at FGD-equipped power plants.

IWC-14-41
Minimizing Wastewater Treatment Costs Through FGD Upgrades
Bryan Hansen, Burns & McDonnell, Centennial, CO

IWC-14-42
Investigation of the Impact of Dissolved Organic Carbon in FGD wastewater on the Treatability of Mercury
Mandi Richardson, URS Corporation, Austin, TX

IWC-14-43
Start Up of a Full Scale Boron Removal System for FGD Waste Water
Bill Carlin, Dow Chemical, Spring House, PA

IWC-14-44
NON-THERMAL ZLD OF FGD WASTEWATER THROUGH ENCAPSULATION: CHALLENGES AND ROAD-MAP TO TECHNOLOGY READINESS
Kirk Ellison, Southern Company Services, Birmingham, AB

FGD Wastewater Characteristics and Treatment
FGD wastewater continues to be complex stream that require innovative methods of measurement and treatment. Operational changes and inconsistent loading add to the challenge and require flexible yet effective treatment processes to consistently meet stringent water quality limits. The upcoming Effluent Limitation Guidelines will only sharpen the focus on innovative treatment processes. This session touches on all these points, and includes papers on operational challenges, FGD blowdown chemistry, and various treatment options. The papers include bench scale, pilot, and full scale studies and detailed discussions on heavy metals handling in these complicated streams.

IWC-14-57
The Impact of Variable and Low Load Operation on Wet Flue Gas Desulfurization Slurry Chemistry and Wastewater, Including Trace Metal Speciation and Effluent Flow Rates, with Suggested Mitigation Strategies
Shannon Brown, Babcock & Wilcox Power Generation Group, Inc., Barberton, OH

IWC-14-58
Reactive Iron Media – An Enhanced Zero Valent Iron Process For Metals and Metalloid Removal From Water and Wastewater
Simon Dukes, Evoqua Water Technologies LLC, Lowell, MA

IWC-14-59
Pilot Studies for the Treatment of a Highly Oxidized Flue Gas Desulphurization Wastewater
Joseph Chwirka, Tetra Tech, Albuquerque, NM

IWC-14-60
Evaluation of a Full-Scale Passive Biological Treatment System (Biofilm) for Selenium Removal in FGD Wastewater
Jeremy Driver, Alabama Power Company, Calera, AL

Sharon DeMeo

US EPA – Region 1

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From: Houlihan, Damien
Sent: Monday, September 15, 2014 10:54 AM
To: Nagle, John; DeMeo, Sharon M.; Gaito, Danielle; Little, Shauna; Papadopoulos, George; Puleo, Shelley; Vergara, Olga
Subject: FW: FY 2015 training plans/requests

See below. Please let me know if you have any interest in training courses or events. I need to get preliminary information to Dave by the 26th, so we'll need to discuss potential training before then. Thanks.

Damien

From: Webster, David
Sent: Thursday, August 21, 2014 12:39 PM
To: Hoagland, Matt; Houlihan, Damien; Murphy, Thelma (Hamilton)
Subject: FY 2015 training plans/requests

Thelma, Damien, Matt,

Please consider you training needs for FY2015 in the Water Permits Branch. Shortly, Ken and the Deputy be prioritizing the Office expected training budget among OEP requests, so let's plan ahead to address staff needs and try to get ours in ASAP. By Friday 9/26/14 COB please send me what you have and then add to it as you become aware of plans.

We expect that again there will be a limited amount to training funds in the OEP Office in FY15. I want to prioritize the Branch's training requests and see if we can get specific training courses or conferences funded, and plan on group registrations if appropriate. So if you or a member of your section has training needs for FY2015 let me know the training course or event, particularly those that costs money, or potentially costs money, that you are requesting to attend. Note that an OD/SRO justification is needed for many opportunities (i.e. with dates and costs known).

I have combined this with collecting estimated non-local travel expenses. Thus, include travel costs and no-cost training events as well.

Please send to me by **C.O.B. September 26, 2014** the following as much as you have. This request is likely to be repeated during the year, but the sooner you plan the best chance of meeting the development needs of your staff and getting a worthy training opportunity funded.

- □□□□□□□ Name
- □□□□□□□ Title of course (or subject, if not known)
- □□□□□□□ Date(s) of course (or time frame, if specific date is unknown)
- □□□□□□□ Location of course/training
- □□□□□□□ Cost of course/training
- □□□□□□□ Travel Costs:
- □□□□□□□ Number of hours in training
- □□□□□□□ Other OEP attendees:
- □□□□□□□ Proposed funding, if known – PRC number, regional funds, program funds, HQ funding

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If you do not know the specifics for a particular training event or need, make an estimate as best you can. One purpose of this information will be to prioritize Water Permits Branch training needs and then to prioritize OEP training budget allocations for OEP. So, to the extent you can plan ahead, I need this information to try to fulfill your needs based on all training requests. Let me know if you want to discuss specific courses.

Include the estimate for any management training for you.

Thanks,

David